

Syllabus

COLLEGE PHYSICS 104x SPRING 2017

4 credits

Lecture Classroom: 201 REIC Building

Lecture Times: 9:15 AM – 10:15 AM Monday, Wednesday & Friday

Instructor: Dr. Daniel Solie

Office: In the Physics Department: Rm 120 REIC. Tel. 474-6106 (office) Tel. 474-7339 (Physics office)

Email: djsolie@alaska.edu

Office Hours: Physics Dept. (Rm. 120): Monday & Wednesday & Friday 10:45-11:45 AM (after class)
Additional time 1-2pm Tuesday and by appointment; in addition homework help can be obtained in room REIC 122 (schedule on door)

Lab Instructors: TBA

Office: RM 128 REIC

Email: TBA

TA office hours and homework help session times will be posted outside RM 128 next week

Weekly Homework Help Sessions: Physics conference room (times will be posted next week)

Web Connections: BlackBoard Site: Phys F104X (FOR ALL LAB SECTIONS F01-F07 (Still Under Development))

Homework: DUE FRIDAY MORNING BEFORE CLASS – TURNED IN TO PHYSICS DEPARTMENT PHYS 104 BOX

COURSE SPECIFICS:

Prerequisites: Physics 103, High school algebra, trigonometry and geometry, placement in ENGL F111x or higher, placement in DEVM F105 or higher, or permission of the instructor (me).

Note: The Math “self test” is a very good indicator on your math preparation.

Course Content:

Physics 104 is a very fast paced survey course which will cover chapters 16-33 in the text. Topics covered are: Electricity & Magnetism (chap. 16-22), Optics (chap. 23-25), and an introduction to Modern Physics (chap. 26-33). Modern Physics Topics covered are: Special Relativity, an introduction to Quantum Theory, Nuclear Physics, Elementary Particles and Cosmology. In short—all of it. This course emphasizes problem solving.

Materials Needed:

Required Text: *Physics, Principles with Applications*, 7th edition, D. Giancoli. Pearson/Prentice Hall Publishers, 2014 (ISBN 9780321625922)

MyLab & Mastering access (www.pearsonmylabandmastering.com) will not be used for homework this semester

Calculators: Calculators should not be necessary in exams; however, **you will need a calculator for homework**. A basic, simple scientific calculator with trigonometric, exponential, and logarithmic functions is all that you need but buy a fancy one if you want – just learn how to use it!

Homework: The homework this semester will be assigned from the text book. Homework will be due once a week on Friday (at 9:00AM- before class!). **HOMEWORK IS TURNED IN TO THE PHYSICS OFFICE WOODEN BOX MARKED PHYSICS 104**. Assignments will average roughly 10 problems (13 homework sets total). Solutions will be posted on in the Physics 104 glass cabinet on the wall in the physics corridor shortly after the due date, consequently **NO LATE HOMEWORK WILL BE ACCEPTED** except in special circumstances. There may be insufficient room to keep solutions posted in the glass case indefinitely so you should check these solutions weekly.

Quizzes: There will be approximately 6 quizzes (either closed book in-class of roughly 15 min in length, or take-home) given every other Friday. Quiz grading will often be done by you in class. These will help improve your problem working skills, and familiarize you with the type of questions I ask as well as my testing style.

Exams: **All exams are closed book** (however, 8 1/2” by 11” formula sheets will be provided). Calculators will be allowed in exams but will probably not be needed. Exams will include mostly problems with some short answer. They will cover concepts and examples from the text, lecture material, homework problems, recitation problems and laboratory exercises. In general, time constraints will

preclude going over exams in class. Solutions to exams will be posted in the 104 glass case in the hall of the physics department, or come and see me.

Exam Dates:

Mid-Term Exam 1: In Class Friday 3 March (covering Chapters 16-20 tentatively)

Mid-Term Exam 2: In Class Friday 7 April (covering Chapters 21-25 tentatively)

Final Exam: 8:00-10:00 AM Friday 5 May (Two hours+: Roughly 1/2 covering chapters 26-33 and the rest covering chapters 16-25)

Laboratory: There is a lab associated with this course. **ALL LABS MUST BE COMPLETED TO GET A PASSING GRADE FOR THIS COURSE (10 total).** There will be a Pre-Lab, for each lab experiment you perform. The Pre-Lab constitutes 10% (10/100pts.) of your Lab score and is due at the beginning of Lab! In addition you must turn in the required written work to complete a lab. Lab attendance does not constitute completion of a lab. The lab grade consists of: (1) PreLab Exercises , (2)Attending and Performing the Lab and (3) Lab Write-up.

NOTE: You must have prior permission to miss a lab and still be allowed to make it up. If you have to miss a lab notify your TA, make arrangements with either Jeanie Talbot or your TA to attend another lab section that same week.

1 May is the last day lab reports will be accepted and graded!

Grading:

Grades given will be on a five step A-F scale (with +/- grades assigned if appropriate) The final, cumulative scores will be curved and final grades assigned on that bases, however, a final percentage score of 90% or above will an be at least an A-).

Midterm Exam 1	15%
Midterm Exam 2	15%
Quizzes (6)	15%
Final Exam	25%
Homework (13)	15%
Lab (10)	15%
Total	100%

Holidays:

Spring Break: Mon-Fri 13-17 March 2017; Spring Fest, Friday 21 April.

Special Needs: The office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. We work with the Office of Disabilities Services (203 WHIT, to 474-7043) to provide reasonable accommodation to students with disabilities.

Plagiarism and Cheating: Plagiarism and cheating are matters of serious concern for students and academic institutions. I take it seriously as well. The UAF Honor Code (Student Code of Conduct) defines the academic standards expected at UAF and is adhered to in this class as well.

Complaints and concerns: I encourage you to talk to me about concerns you have with the class etc., however, if the situation warrants, you can contact the Physics Department Chairman, Dr. Renate Wackerbauer at rawackerbauer@alaska.edu or 474-6108.

Last Day to Drop this Class: 27 January

Last Day to Withdraw from this Class: 31 March

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